

Inauguration of Bill Lockyer

January 8, 2007

- Peter Schwartz -

There's nothing like being introduced by Willie Brown. Mr. Treasurer, Mr. Treasurer Elect, Madam Justice, many distinguished guests, Mr. Brown, I'm genuinely honored to be asked by my friend, Bill Lockyer to speak today. These are very rare occasions when one has the opportunity to set out a vision for where California could go.

On this occasion my theme is that California is an engine for evolution and it is the job of the State Treasurer, Mr. Treasurer Elect, to help create the conditions for that evolution by taking a long view of a better future. By economic evolution, I mean a higher standard of living and a better material life for the people of California. And of course, California has done extremely well in this respect.

Not only have the people of California done remarkably well, but California has also been a leading innovator in creating political wealth, social wealth, ecological and natural wealth. By these I mean mechanisms for creating an open and tolerant society, building green energy, coastal zone protection—all the things that our government and society have done over many preceding decades and upon which we are building today. Yet economic evolution is one of the areas where, in fact, the Treasurer plays a particularly important role. And by that, I mean something very simple. It's about the evolution of complexity.

Imagine, if you will, that you were living today among the Yanomamo. Now, who are they? They are a tribe on the border of Brazil and Venezuela that lives much as humanity did in the Stone Age. They don't even have the wheel, although they do have fire and a few other

things.

If you're in business then you know the term "SKU" (stock keeping unit), the basic unit of every single item in inventory. Well, how many SKUs does it take to support a Yanomamo? A couple hundred, maybe a thousand. But how many individual SKUs does it take to support every single one of you? Well, it's not a few hundred or a few thousand. It's ten billion. Ten billion! When you had your breakfast this morning, think about what went into that meal. It wasn't just the cereal and the milk and the eggs and the orange juice. It was everything it took to grow and produce your food—the whole agricultural industry—and to get that to you. That's how we get to ten billion. And it is the constant elaboration of these new micro niches of human needs and innovations and our efforts to fill all of these needs over time that creates wealth. And California creates wealth of all sorts faster and better than any other society in human history.

Diversity is the biggest driver of that wealth as we try lots of different ways of filling all those niches that complexity and human innovation are creating. It is why we are evolving so fast, changing so fast, and getting rich so fast in so many different ways. One of the important things that drives this evolutionary process is that, since the Renaissance, we are more and more the masters of our own fate. Before then, we were the victims of circumstance, of the forces of nature, of conquest, of disease. But as political progress, economic progress, social progress and scientific and technological progress have moved forward, we have gained greater and greater mastery over our future. We are less and less the victims of historical circumstance. Now, if you're a Bosnian or Shiite, that might be a little less true, but for more and more of us in the world, it is true. What we think and do matters more. We make our own future.

The State Treasurer has many tools to help create the foundations of that evolution, to guide that process with foresight, and to help fund the infrastructure that enables our economy.

He can guide the investment program of CalPERS, itself a remarkable innovation in government. He has the opportunity to help provide better and cheaper housing and bring ideas like smart growth into that process. He could help fund innovations behind healthcare. And much of this is in the service of creating conditions that develop, retain, and attract talent, the most important source of evolution.

Now, taking the long view does not mean ignoring the present. The Treasurer must be concerned about today, next week, next year, as well as the decades ahead. He has to rise to the obvious challenges in front of us and he has to reach for great aspirations. That is how our state has moved forward. The Treasurer can dream big about how to build the potential for the future.

So let me set out some of those challenges and some of those possible aspirations. I think there are at least three great challenges and they're familiar to everyone.

The first and most obvious is climate change and environmental quality. The job here is to accelerate the turnover of the capital stock of our society, replacing old inefficient factories, transportation systems, trucks and buses and cars, houses and buildings, and bring to bear more new and efficient technology, much of it developed here in California.

The second great challenge is immigration. We are not going to stop the immigration and we probably don't want to stop it. So the great challenge for the Treasurer is how to help sustain the engine of job creation that both attracts and supports immigrants as well as to help fund the necessary social services that will be required even as that immigration proceeds.

The third great challenge is global competition. I think it's obvious to everybody that with the rise of China and India close to two billion people are moving out of poverty and into the middle class -- think about it as two Koreas every decade rising in China alone. They will soon be able to compete in doing everything that we do at least as well as we can and cheaply.

So we have to sustain the engine of evolution here in California to develop new and competitive positions that will enable us to succeed in that global economy. We must continue to improve the competitiveness of existing businesses, and the most important asset is, of course, well trained workers at every level, from high-tech entrepreneurs to field hands. So we have to sustain the quality of education as well as social innovation, like affordable healthcare that creates the right conditions for labor mobility and a flexible economy, and thereby enables sustained evolution.

So those are the great challenges: climate change, immigration, and global competition. But it's about more than solving today's problems. It's about aspiring toward a better and greater future and I think the State Treasurer can aspire to more.

We can, for example, reduce the infirmities of aging via biotechnology. I think this will matter to many of us here today. Over the years ahead we are going to be able to reverse many infirmities: better vision, better memory, better hearing, stronger bones, better muscles, and so on. Our old age will be very different than previous generations as a result of the biotechnology now being developed in the laboratories and companies of California. We will age very gracefully. And our children? Our children will see their lives extended beyond decades to centuries. We are seeing the birth of the first generation of young Methuselahs. My 16-year-old son, Ben, will probably live to see the next two, three, and four centuries. That's what we are beginning here in California.

The second great opportunity is, of course green technologies via nanotechnology—the ability to manipulate matter and energy at an unbelievably small scale. We're going to see new materials, thin films for solar energy, new bioindustrial processes that reduce the impact of industry on the environment, new kinds of agriculture that improve efficiency and use less water,

new kinds of energy and biofuels made from a great variety of sources, and obviously new forms of waste treatment. And of course, since I come from Berkeley, we have even had protests against nanotechnology already. It's in our tradition. "Ban the Particles." We have actually regulated nanotechnology in Berkeley, so we're right out in front as always.

And the third great opportunity is making all of these technologies possible through the frontiers of computing. There's a lot of fear that the world of computing is over, that Moore's Law is over. Well, let me tell you, it's barely begun. We are already seeing the first of the next three waves of computing technology in spintronics, the ability to encode information in the magnetic spin of an electron. What that will mean is that your laptop in three years will have no hard drive. It will weigh a third of what it weighs today and be vastly more powerful. But that's not all. Then comes nanophotonics with gigabyte networks that are unbelievably fast. And then finally—quantum computing, which is computing at the scale of subatomic particles that comprise matter. These computers will make the computers that we have today seem like slide rules. This wave has barely begun and will solve problems of immense complexity. How do you manage and control DNA and proteins? We may even learn, finally, how to predict earthquakes. And where is all this happening? At Alboton Labs, at IBM, at HP, at UC Santa Barbara, at UCLA, that's where it's happening in terms of quantum computing. So again, California is in the forefront.

So we see these great opportunities and aspirations to transform life through science and technology, through the inventions of things like nanotechnology, biotechnology, quantum computing, all of which have their origins here in California.

So you have great opportunities in front of you, Mr. Treasurer. How will we know if you had a successful two terms? Well, you will have fulfilled most of that potential I've just

described. Californians will be richer, better housed. Hopefully our landscapes will be greener and our air cleaner. It'll be a less congested state, more secure, populated by people living longer. It will certainly be a more desirable place. And most important, you will have created more potential upon which your successor can build an even better California. We hope for and depend upon your success. Mr. Lockyer, we wish you well.

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Peter Schwartz is cofounder and chairman of Global Business Network. An internationally renowned futurist and business strategist, Schwartz specializes in scenario planning, working with corporations, governments, and institutions to create alternative perspectives of the future and develop robust strategies for a changing and uncertain world. He is the author of "Inevitable Surprises," a provocative look at the dynamic forces at play in the world today and their implications for business and society and "The Art of the Long View," which is considered a seminal publication on scenario planning. He publishes and lectures widely and served as a script consultant on the films "The Minority Report," "Deep Impact," "Sneakers," and "War Games." Schwartz received a B.S. in aeronautical engineering and astronautics from Rensselaer Polytechnic Institute.

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